

REMARKS:

I. Introduction

In the Office Action mailed on April 12, 2006, the Examiner rejected claims 1 to 42. The present amendment cancels claim 2, amends claims 1 to 3, 5 to 11, 13 to 16, 18, 21 to 26, 29 to 33, and 37 to 42, and adds no new claims. Accordingly, claims 1 to 42 remain pending in this application.

II. Additional Information Required under 37 C.F.R. 1.105

(a) Publications and patents relied on to develop the present application: US 5,584,212 "Cable End Fitting With Simplified Assembly"; US 5,682,797 "Adjustment Lock With Fingers"; US 5,823,063 "Shift Column Cable Assembly"; US 2002/0053253A1 "Spring For Attaching Cable End Fitting or Bracket"; EP 0509629A2 "Bowden Cable Adjusting Device Rotatably Mounted on the Cable Conduit"; EP 0810379A2 "Serviceable Core Adjustment"; EP 0821168A2 "Cable Length Adjustment Mechanism"; and DE 19528953 "Befestigungselement fur einen Betagigungszug". Each of these publications and patents were relied on as background information establishing the state of the art. Copies of each the above publications and patents have been previously submitted.

(b) Publications and patents relied on to draft the claimed subject matter: US 5,584,212 "Cable End Fitting With Simplified Assembly"; US 5,682,797 "Adjustment Lock With Fingers"; US 5,823,063 "Shift Column Cable Assembly"; US 2002/0053253A1 "Spring For Attaching Cable End Fitting or Bracket"; EP 0509629A2 "Bowden Cable Adjusting Device Rotatably Mounted on the Cable Conduit"; EP 0810379A2 "Serviceable Core Adjustment"; EP 0821168A2 "Cable Length Adjustment Mechanism"; and DE 19528953 "Befestigungselement fur einen Betagigungszug". Each of these publications and patents were relied on as background information establishing the state of the art. Copies of each the above publications and patents have been previously submitted.

(c) The subject matter of the claims provides at least the following improvements over the prior art:

(1) The lock extends on both sides of the mounting bracket by having an "I" beam construction that "sandwiches" around the anti-rotation slot of the mounting bracket. By having material engaging each side of the mounting bracket, the assembly will be stopped from

extracting from the mounting bracket if excessive loads are applied and the mounting prongs fail;

(2) Slots formed by the I-beam construction of the lock that receive the mounting bracket are provided with a ramp feature for tolerance take-up and ant-rattle;

(3) Interlock tabs are provided that on the front section of the lock that interlock with the slider. The interlock helps carry loads in the longitudinal direction if excessive loads are applied to the assembly;

(4) The lock is provided with a rear snap tab that holds the lock tighter to the slider to give the teeth stronger holding power. The rear snap tab is used as a secondary lock to carry excessive loads and reduce system lash at higher loads; and

(5) The slider is provided with a snap tab that secures the slider to the mounting bracket. The snap tab is used as a secondary lock.

(d) The claims present at least the following novelty over the state of the art:

(1) Independent claim 1 includes at least “wherein the lock body includes a front section, a rear section forming the plurality of teeth of the lock body, and an intermediate section located between the front section and the rear section and forming opposed lateral slots’ and “a fixed mounting bracket extending into the slots to interlock the lock body and the mounting bracket.” While the state of the art shows mounting brackets extending into slots formed in the slider, it does not show mounting brackets extending into slots formed in the lock to provide additional holding power;

(2) Independent claim 10 includes at least “wherein the lock body has opposed lateral slots formed therein” and “a fixed mounting bracket having an opening receiving the slider body therein and a slot extending from the opening to an edge of the mounting bracket with edges of the slot of the mounting bracket located in the slots of the lock body to interlock the lock body and the mounting bracket.” While the state of the art shows mounting brackets extending into slots formed in the slider, it does not show mounting brackets extending into slots formed in the lock to provide additional holding power;

(3) Independent claim 18 includes at least “wherein the lock body extends through the mounting bracket and has a front section located at one side of the mounting bracket and interlocking with the slider body and a rear section located on the other side of the mounting bracket and forming the plurality of teeth of the lock body.” The state of the art does not show a lock body having such a construction;

(4) Independent claim 26 includes at least “wherein the lock body has a snap lock located at an end of the lock body opposed to the mounting bracket that engages the slider body to releasably lock the lock body to the slider body.” The state of the art does not show a lock body having such a construction;

(5) Independent claim 33 includes at least “wherein the mounting bracket has an aperture spaced from the opening and the slider body has a snap-lock that engages the aperture to releasably lock the slider body to the mounting bracket. The state of the art does not show a slider body having such a construction; and

(6) Independent claim 41 includes the limitations identified above with regard to independent claims 1, 10, 18 and 26. As stated above, the state of the art does not show any of these constructions.

(e) There are no pending or abandoned applications invented by the inventors or owned the assignee that discloses subject matter similar to the claimed subject matter.

III. Objections

(a) The Examiner objected to the drawings because figures 6 and 7 show the slider 34 as made of metal while paragraph 0042 of the specification states that the slider is made of plastic material. Enclosed herewith are replacement sheets for FIGS. 6 and 7 wherein the figures have been corrected to show plastic material as described in the specification. Reconsideration and withdrawal of the objection is requested.

(b) The examiner objected to the drawings under 37 C.F.R. 1.83(a) because the drawings do not show both the disengaged and engaged positions as claimed in claims 1, 10, 18, 26, 33 and 41. The claims have been amended to remove the “disengaged portion”. Reconsideration and withdrawal of the objection is requested.

(c) The Examiner objected to the specification because the specification is inconsistent with the drawings. As discussed above, replacement sheets for FIGS. 6 and 7 have been provided wherein the figures have been corrected to show plastic material as described in the specification. Reconsideration and withdrawal of the objection is requested.

(d) The examiner objected to the specification because it does not provide antecedent basis for "a first section", "a second section" and "a third section" of the lock body in claims 1 and 18. The claims have been amended to front, rear and intermediate sections as described in the specification as items 94, 100 and 96. Reconsideration and withdrawal of the objection is requested.

(e) The examiner objected to the disclosure because in claim 5, "first section" should be "the first section." Claim 5 has been amended so that "first section" has been amended to "the front section". Reconsideration and withdrawal of the objection is requested.

IV. Claim Rejections Based on 35 U.S.C. § 112

The Examiner rejected claims 1 to 42 under 35 U.S.C. 112, second paragraph, as being indefinite. The items cited by the Examiner have been corrected. Reconsideration and withdrawal of the objection is requested.

V. Claim Rejections Based on 35 U.S.C. § 102(b)

(a) The Examiner rejected claims 1 and 5 to 7 under 35 U.S.C. 102(b) as anticipated by Malone (EP 0810379A2).

Independent claim 1 has been amended to include the subject matter of prior claim 2. Reconsideration and withdrawal of the rejection is requested.

(b) The Examiner rejected claims 1 and 5 and 6 under 35 U.S.C. 102(b) as anticipated by Reasoner (US 5,632,182).

Independent claim 1 has been amended to include the subject matter of prior claim 2. Reconsideration and withdrawal of the rejection is requested.

VI. Claim Rejections Based on 35 U.S.C. § 103(a)

The Examiner rejected claims 2 to 4, 10 to 14, and 18 to 22 under 35 U.S.C. 103(a) as being unpatentable over Reasoner (US 5,632,182) in view of Suzuki et al. (US 6,340,265).

Reasoner discloses a fastening assembly for a control cable that is adjustable but does not disclose how the assembly is secured to a mounting bracket.

Suzuki et al. disclose a fastening assembly for a control cable that discloses how the assembly is secured to a mounting bracket but does not disclose whether the assembly is adjustable. As shown in figure 13 of Suzuki et al., a common method of fastening the assembly to a mounting bracket is to insert a reduced diameter portion (102) through an opening (104) in the mounting bracket (103) so that it abuts the mounting bracket and then install a retaining clip (105) onto into a groove (101) located on the other side of the mounting bracket to secure the assembly to the mounting bracket. Upon excessive loads, the clip can fail or undesirable lash can develop. To combat this problem, Suzuki et al. provide threads on the reduced diameter portion (3b) and replaces the retaining clip with a threaded nut (6). Thus, the mounting bracket is secured between the abutment and the nut. To prevent untightening of the nut, the nut is biased in the tightening direction by a torsion spring (7) that is held in a groove (8). The mounting bracket is not received in a groove or slot of any kind let alone a slots in a lock member that is not even shown.

In contrast, the present invention combats failure and lash due to excessive loads in an entirely different manner. The lock body of the present invention extends on both sides of the mounting bracket by having an "I" beam construction that "sandwiches" around the anti-rotation slot of the mounting bracket. By having material engaging each side of the mounting bracket, the assembly is stopped from extracting from the mounting bracket if excessive loads are applied and the mounting prongs fail. Slots formed by the I-beam construction of the lock that receive the mounting bracket. Additionally, interlock tabs are provided on the front section of the lock body that interlock with the slider body. This interlock helps carry loads in the longitudinal direction if excessive loads are applied to the assembly.

Independent claim 1, and claims dependent therefrom, are allowable because they each include the limitations of "wherein the lock body includes a front section, a rear section forming the plurality of teeth of the lock body, and an intermediate section located between the front section and the rear section and forming opposed lateral slots" and "a fixed mounting bracket extending into the slots to interlock the lock body and the mounting bracket." No prior art of record reasonably discloses or suggests the present invention as defined by claim 1. Reconsideration and withdrawal of the rejection is requested.

Independent claim 10, and claims dependent therefrom, are allowable because they each include the limitations of "a fixed mounting bracket having an opening receiving the slider body therein and a slot extending from the opening to an edge of the mounting bracket with edges of the slot of the mounting bracket located in the slots of the lock body to interlock the lock body and the mounting bracket." No prior art of record reasonably discloses or suggests the present invention as defined by claim 10. Reconsideration and withdrawal of the rejection is requested.

Independent claim 18, and claims dependent therefrom, are allowable because they each include the limitations of "wherein the lock body extends through the mounting bracket and has a front section located at one side of the mounting bracket and interlocking with the slider body and a rear section located on the other side of the mounting bracket and forming the plurality of teeth of the lock body." No prior art of record reasonably discloses or suggests the present invention as defined by claim 18. Reconsideration and withdrawal of the rejection is requested.

VII. Allowable Subject Matter

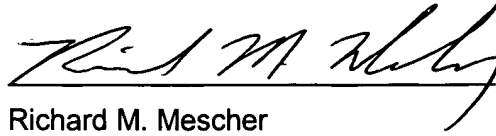
Applicants acknowledge that claims 8, 9, 15 to 17, 23 to 25 would be allowable if rewritten to overcome the 112, second paragraph, rejection and to include all of the limitations of the base claim and any intervening claims.

Applicants also acknowledge that claims 26 to 42 would be allowable if rewritten to overcome the 112, second paragraph, rejection.

VIII. Conclusion

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is found that the present amendment does not place the application in a condition for allowance, Applicant's undersigned attorney requests that the Examiner initiate a telephone interview to expedite prosecution of the application. If there are any fees resulting from this communication, please charge same to our Deposit Account No. 16-2326.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Richard M. Mescher", written over a horizontal line.

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